# Lecture #7

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### For Loops

- var changes in loop
- set an explicit endpoint
- caution on sequence endpoints
- caution about initialization and variables outside loops
- always make the loop variable an integer
- still easy to operate on character strings

## Building a Random Walk Model Of Population Growth

- defining a few global variables
- bundling things into a function
- use the break function to get stop a loop prematurely

#### Double For Loops

- traverse a matrix and operate on each element
- traverse a matrix with a constant operation
- constants for the rows
- constants for the columns

## Doing same things without loops

- vectorized call for operation on each element
- vectorized call for operation with constant
- ullet loop through the rows
- loop through the columns